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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,398	10/15/2003	Ajaykumar R. Idnani	CE10711R/10-183	8594

23400 7590 02/23/2005

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EXAMINER

LE, DANH C

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,398

Applicant(s)

IDNANI ET AL.

Examiner

DANH C LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7, 12-14, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1, 5, 6, 12, 19 are rejected under 35 U.S.C. 102(b) as being anticiapted by Shimizu (US 2002/0009066).**

As to claim 1, Shimizu teaches a method for specially handling messages addressed to multiple mobile nodes in a wireless communication system (figure 1 and paragraph 0022-0024) comprising a home agent (HA) serving a home subnet and a foreign agent (FA) serving a foreign subnet, the home agent communicating with the foreign agent through a plurality of unicast tunnels corresponding to a plurality of mobile nodes served by the foreign agent, the method comprising:

establishing a special communications channel between the home agent and the foreign agent, the special communications channel dedicated to messages addressed to multiple mobile nodes (paragraph 0073-0074);

detecting whether a message received by the home agent is addressed to multiple mobile nodes (paragraph 0024); and

when the message is addressed to multiple mobile nodes, sending the message to the foreign agent through the special communications channel (paragraph 0024).

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As to claim 5, Shimizu teaches a method of claim 1, wherein establishing the special communications channel comprises opening an IP-in-IP tunnel between the foreign agent and the home agent for receiving the messages addressed to multiple mobile nodes (21).

As to claim 6, Shimizu teaches the method of claim 1, wherein establishing the special communications channel comprises opening a minimal encapsulation tunnel between the foreign agent and the home agent for receiving the messages addressed to multiple mobile nodes (paragraph 0009, 0014).

As to claim 12, the claim is a system claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

As to claim 19, the claim is a software program claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 2-4, 7, 13, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (US 2002/0009066) in view of Eyuboglu (6,781,999).**

As to claim 2, Shimizu teaches a method of claim 1, Shimizu fails to teach the messages addressed to multiple mobile nodes can include Broadcast messages and Multicast messages, and wherein detecting whether the message received by the home agent is addressed to multiple mobile nodes comprises detecting whether the message is addressed as one of a Broadcast message and a Multicast message. Eyuboglu teaches the messages addressed to multiple mobile nodes can include Broadcast messages and Multicast messages, and wherein detecting whether the message received by the home agent is addressed to multiple mobile nodes comprises detecting whether the message is addressed as one of a Broadcast message and a Multicast message (figure 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Eyuboglu into the system of Shimizu in order to deliver variety of broadcast or multicast applications and service.

As to claim 3, the combination of Shimizu and Eyuboglu teaches the method of claim 1, wherein establishing the special communications channel comprises establishing a first channel for Broadcast messages and a second channel for Multicast messages, and wherein sending the message to the foreign agent comprises sending a Broadcast message through the first channel and sending a Multicast message through the second channel (figure 5).

As to claim 4, the combination of Shimizu and Eyuboglu teaches the method of claim 1, wherein establishing the special communications channel comprises establishing a single channel for sending both Broadcast messages and Multicast

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messages, and wherein sending the message to the foreign agent comprises sending the message through the single channel when the message is one of a Broadcast message and a Multicast message (figure 7),

As to claim 7, the combination of Shimizu and Eyuboglu teaches the method of claim 1, wherein establishing the special communications channel comprises opening a Generic Routing Encapsulation (GRE) tunnel between the foreign agent and the home agent for receiving the messages addressed to multiple mobile nodes (col.1, line 53-col.2, line 9).

As to claim 13, the claim is a system claim of claim 3; therefore, the claim is interpreted and rejected as set forth as claim 3.

As to claim 14, the claim is a system claim of claim 4; therefore, the claim is interpreted and rejected as set forth as claim 4.

As to claim 20, the claim is a software program claim of claim 2; therefore, the claim is interpreted and rejected as set forth as claim 2.

Allowable Subject Matter

Claims 8-11, 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 8 and 15, the teaching of prior arts either combination or alone fails to teach wherein the wireless communication system comprises a plurality of foreign agents coupled to the home agent, and

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wherein the method further comprises monitoring, by the home agent, Multicast Join messages sent from some of the plurality of mobile nodes, and wherein sending the message to the foreign agent comprises sending Multicast traffic only to ones of the plurality of foreign agents that serve a mobile node that has sent one of the Multicast Join messages.

As to claims 9 and 16, the teaching of prior arts either combination or alone fails to teach the foreign agent monitoring Multicast Join messages sent from some of the plurality of mobile nodes and sending Multicast traffic only to ones of the plurality of mobile nodes that have sent one of the Multicast Join messages.

As to claims 10, 11 and 18, the teaching of prior arts either combination or alone fails to teach establishing the special communications channel comprises sending a Registration message from one of the plurality of mobile nodes to the foreign agent, appending, by the foreign agent in response to the Registration message, an extension to the Registration message to create an appended Registration message, the extension advertising support for the special communications channel and forwarding the appended Registration message from the foreign agent to the home agent.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Miki et al (US 2002/0176414) teaches packet switching apparatus.

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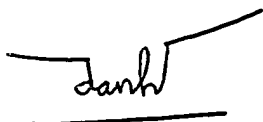
B. Basilier (US 2003/0073453) teaches system and method for multicast communications.

C. Ozugur (US 2003/0202505) teaches hierarchical wireless network and an associated method for delivering IP packets to mobile stations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C LE whose telephone number is 703-306-0542. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



February 18 2005.

DANH CONG LE
PATENT EXAMINER